

Advanced Photon Source

User Policies & Procedures

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Policy & Procedure #:	3.1.35
Revision #:	0
Issue Date:	9/9/10
Review Period:	1 year
Supersedes:	See Below
Last Reviewed:	9/9/10

LOW-ACTIVITY SEALED RADIOACTIVE SOURCES

Supersedes:

Formerly APS Technical Update - No. 15, Policy for Management of Low-Activity Sealed Radioactive Calibration Sources by APS Users, reviewed October 4, 2007

Changes made in this revision:

- Format and editorial changes including extraction from the integrated APS User Safety Policies and Procedures to make a stand-alone policy and procedure.
- Reference to specific legacy ESH Manual chapters deleted.
- Added training requirements.

Prepared by:

Steve Davey, AES

Reviewed by:

AES/ESH Coordinator
AES/UES Group Leader
XSD/ESH Coordinator
AES/MIS ADD

Approved by:

AES/Division Director
APS/Deputy Director, X-ray Science
APS/Director

APS_1410269

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1 Policy

Scope - This policy describes how APS users will manage low-activity (less than 5 mCi) radioactive calibration sources that are certified* as sealed.

1. Transport - APS users will make advance arrangements through the AES Sealed Source Custodian for all shipments of radioactive sources to and from Argonne and between noncontiguous buildings on the site. Argonne's Materials Control & Accountability (MC&A) will manage all such shipments. Prior to shipment, MC&A personnel will assign a control number to the shipment and will provide instructions on the proper packaging, labeling, and addressing of the shipment. Receipt and delivery of sources purchased through APS User Accounts will be managed by Argonne Receiving and Health Physics personnel as described in Argonne ESH manuals/LMS procedures. Under no circumstances may sealed radioactive sources be transported from one Argonne location to another in a personal vehicle.
2. Custodian - Each CAT/CDT/XSD Director will appoint a source custodian.
3. Inventory - As soon as possible after a new source arrives at the APS, the source custodian will document it by completing a New Source Entry Form and sending a copy to the AES SSID Coordinator. Blank forms are available from the Office of the AES ES&H Coordinator. The source custodian will give the AES SSID Coordinator an inventory update every 6 months, and within 15 days after any significant changes.

Note: these sources, if brought to Argonne for periods of less than 60 days, are exempt from the leak-testing and site-wide inventory provisions of Argonne ESH manuals/LMS procedures.

4. Storage - The source custodian will ensure that the sources are properly labeled, stored, and tested for integrity on a periodic basis as described in Argonne ESH manuals/LMS procedures. The sources must be stored in a locked cabinet, which is used only for that purpose. The preferred location for the cabinet is in one of the LOM labs assigned to the CAT/CDT/XSD; this lab will then be designated as a controlled area.
5. Tracking - The custodian will also be responsible for knowing the location of all sources at all times, authorizing users of the sources, and will ensure that all necessary records are maintained. The Sealed Source Checkout Record form (model available from AES ESH Coordinator) will be used to track locations; any authorized user who checks out a source will enter the indicated information on this form.

6. Securing the source - Authorized users will ensure that sealed sources are not left unattended and unsecured while checked out, and will return them promptly after use. The source custodian may designate temporary storage locations where sealed sources can be secured while checked out. A sealed source that is in use inside a radiation enclosure for a calibration will be considered “secured” for the duration of the calibration period if all doors to the enclosure are closed and posted with appropriate signs.
7. Internal moves - Authorized users may move sealed sources between controlled areas within the APS facility (for example, to the Experiment Hall floor from the LOM lab where the source is stored); the user will promptly enter the new location on the Sealed Source Checkout Record.

* Per Argonne ESH manuals/LMS procedures, “[Accountability and Control of Sealed Radioactive Sources](#)”.

2 TRAINING REQUIRED

The use of exempt radioactive sealed sources requires GERT (ESH738) training.
The use of non-exempt radioactive sealed sources requires Radiation Worker 1 (ESH700) training.

3 FEEDBACK AND IMPROVEMENT

If you are using this procedure and have comments or suggested improvements for it, please go to the [APS Policies and Procedures Comment Form](#) * to submit your input to a Procedure Administrator. If you are reviewing this procedure in workflow, your input must be entered in the comment box when you approve or reject the procedure.

* http://www.aps.anl.gov/Internal/Policies_and_Procedures/comment_form.php